

## CLAIMS

What is claimed is:

1. A method performed by one or more components in a network comprising a plurality of paths between a first device and a second device, the method comprising:
  - 5       conducting a first performance test of a first type over a first path of the plurality of paths between the first and second devices;
  - conducting a second performance test of the first type over a second path of the plurality of paths between the first and second devices;
  - wherein the first and the second performance tests are performed simultaneously
  - 10       or within a close time proximity.
2. The method of claim 1, wherein the first performance test produces a first set of results;
  - wherein the second performance test produces a second set of results; and
  - further comprising presenting a service level performance comparison based on
  - 15       the first and second sets of results.
3. The method of claim 2, wherein the first performance test includes a plurality of first individual performance tests performed over an extended time duration; and
  - the second performance test includes a plurality of second individual performance tests performed over the extended time duration.
- 20       4. The method of claim 3, wherein each of the pluralities of first and second individual performance tests are performed at roughly periodic intervals over the extended time duration.
5. The method of claim 1, wherein the first path transverses a first access network, a first transport network, and a second access network; and the second path transverses
  - 25       the first access network, a second transport network, and the second access network.

6. The method of claim 1, further comprising receiving a scheduling request representing the first and second performance tests.

7. The method of claim 6, wherein the scheduling request is received by a scheduling system; and the scheduling system communicates a first indication of the request to the first device.

8. The method of claim 7, wherein the scheduling system further communicated a second indication of the request to the second device.

9. The method of claim 6, further comprising scheduling the first and second performance tests based on the scheduling request and a random time component.

10. The method of claim 6, further comprising determining whether the scheduling request is authorized.

11. The method of claim 10, further comprising indicating that the scheduling request is not authorized.

12. The method of claim 6, further comprising determining whether the scheduling request conflicts with a second scheduling request.

13. The method of claim 6, further comprising determining whether a number of scheduled tests exceeds a first threshold number for the first device or exceeds a second threshold number for the second device.

14. The method of claim 13, further comprising indicating a failed scheduling request.

15. A computer-readable medium containing computer-executable instructions for performing the method of claim 1.

16. A network comprising:  
a plurality of paths between a first device and a second device;  
means for conducting a first performance test of a first type over a first path of the plurality of paths between the first and second devices;

5 means for conducting a second performance test of the first type over a second path of the plurality of paths between the first and second devices;  
wherein the first and the second performance tests are performed simultaneously or within a close time proximity.

17. The network of claim 16, wherein said means for conducting the first  
10 performance test includes means for generating a first set of results;  
wherein said means for conducting the second performance test includes means for generating a second set of results; and  
further comprising means for presenting a service level performance comparison based on the first and second sets of results.

18. The network of claim 16, wherein the first path transverses a first access  
15 network, a first transport network, and a second access network; and the second path transverses the first access network, a second transport network, and the second access network.

19. The network of claim 16, further comprising means for receiving a scheduling  
20 request representing the first and second performance tests.

20. The network of claim 19, further comprising means for scheduling the first and second performance tests based on the scheduling request and a random time component.

21. A network comprising:

a first device coupled to a first access network;

a first access network coupled to a first and a second transport networks;

a second access network coupled to the first and the second transport networks;

5 and

a second device coupled to the second access network;

wherein a performance test is conducted between the first device and the second device over each of the first and second transport networks simultaneously or within a close time proximity.

10 22. The network of claim 21, wherein the first device is coupled to a first router, wherein the first router selectively routes performance testing packets received from the first device over a first path to the first transport network and a second path to the second transport network.

23. The network of claim 21, further comprising a performance test scheduler.

15 24. The network of claim 23, further comprising a client device, wherein the client device transmits one or more scheduling requests for the performance test.

25. The network of claim 24, further comprising a results collector for receiving a set of results associated with the performance test.

20 26. The network of claim 25, wherein the results collector transmits at least a subset of the set of results to the client device.

27. The network of claim 23, wherein the performance test scheduler communicates a scheduling instruction associated with the performance test to the first device.

28. The network of claim 27, wherein the performance test scheduler communicates a second scheduling instruction associated with the performance test to the second device.

29. The network of claim 28, wherein the second device includes a test mode; and  
5 wherein the second device enters the test mode in response to receiving the second scheduling instruction.

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